



Rewarding Learning

General Certificate of Secondary Education  
January 2016

Centre Number

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Candidate Number

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# Mathematics

Unit T5 Paper 1  
(Non-calculator)

Foundation Tier



\*GMT51\*

[GMT51]

**WEDNESDAY 13 JANUARY, 9.15 am–10.15 am**

## TIME

1 hour.

## INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

**You must answer the questions in the spaces provided.**

**Do not write outside the boxed area on each page, on blank pages or tracing paper.**

Complete in blue or black ink only. **Do not write with a gel pen.**

Answer **all eighteen** questions.

All working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You **must not** use a calculator for this paper.

## INFORMATION FOR CANDIDATES

The total mark for this paper is 50.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Functional Elements will be assessed in this paper.

Quality of written communication will be assessed in Question 12.

You should have a ruler, compasses and a protractor.

The Formula Sheet is on page 2.

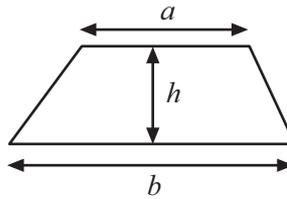
9861



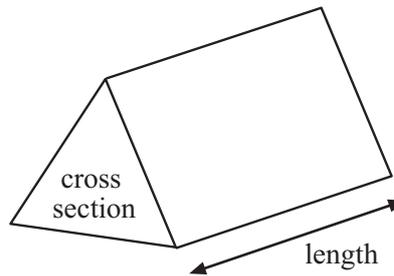
\*20GMT5101\*

# Formula Sheet

$$\text{Area of trapezium} = \frac{1}{2}(a + b)h$$



$$\text{Volume of prism} = \text{area of cross section} \times \text{length}$$





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**(Questions start overleaf)**

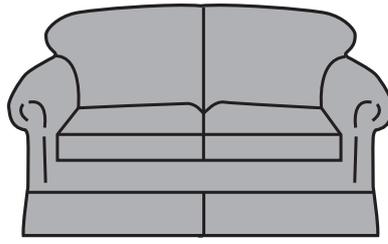
**[Turn over**

9861



\*20GMT5103\*

1



Andy and Bill bought the same type of sofa in two different shops.

Andy paid £180 deposit and £40 per month for 12 months.

Bill made one payment of £600

Who paid less for the sofa and how much less did he pay?

Answer \_\_\_\_\_, £ \_\_\_\_\_ [4]



2 (a) **Estimate** how many clocks costing £6.95 each could be bought for £67

Show your working.

Answer \_\_\_\_\_ [2]

(b) **Estimate** the total length of 43 caravans whose average length is 6.7 metres.

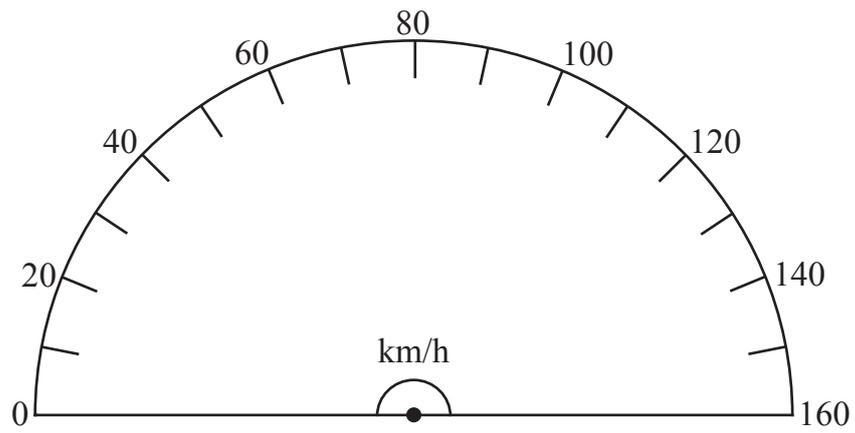
Show your working.

Answer \_\_\_\_\_ m [2]

[Turn over

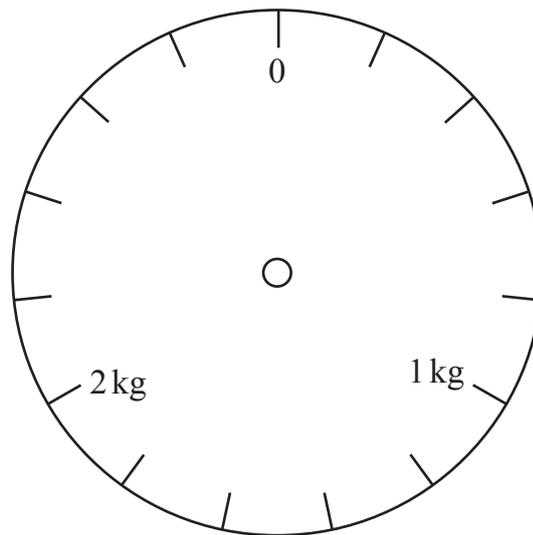


3 (a) Draw an arrow to show 55 km/h on the speedometer.



[1]

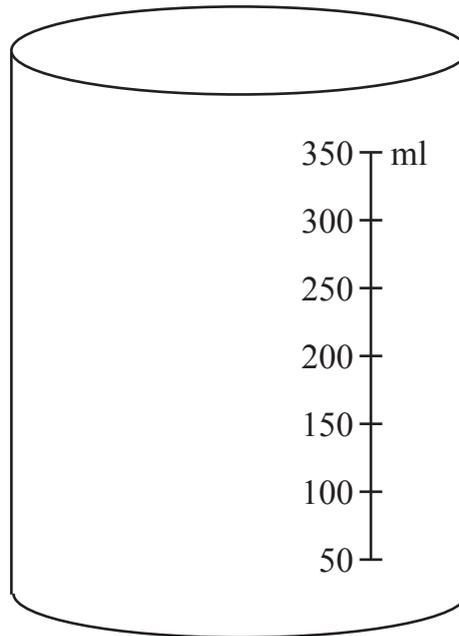
(b) Draw an arrow to show 600 g on the weighing scale.



[1]



(c) Draw an arrow to show 225 ml on the measuring jug.

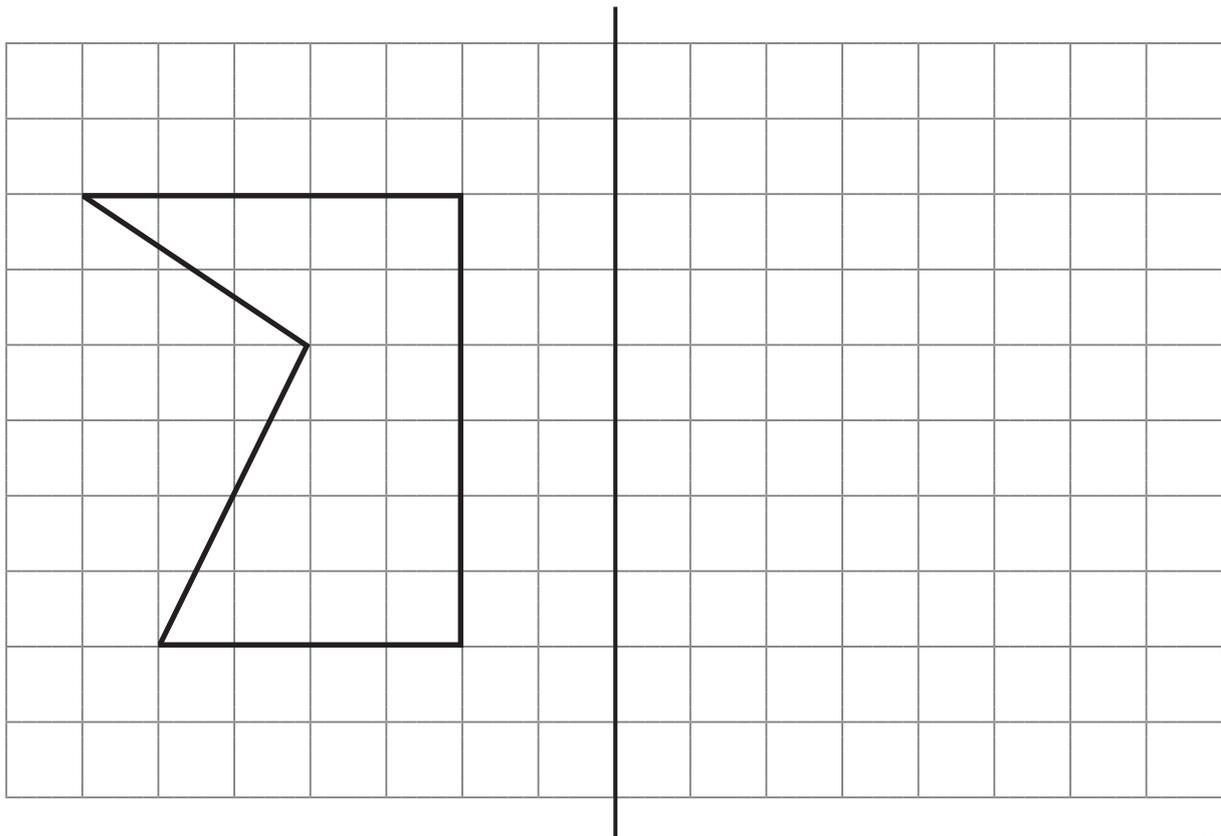


[1]

[Turn over



4 On the grid below draw the reflection of the shape in the given line.



[2]

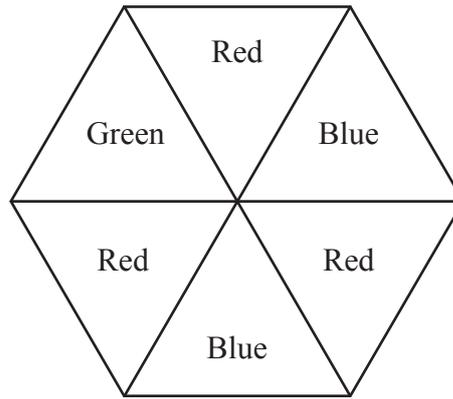




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**(Questions continue overleaf)**



- 5 (a) Here is a fair 6-sided spinner.



Jayne will spin this spinner once.

The spinner will land on one of the colours.

Circle the word that best describes the chance of each of the following events.

- (i) The spinner will land on Green

impossible      unlikely      even      likely      certain

- (ii) The spinner will land on Red

impossible      unlikely      even      likely      certain

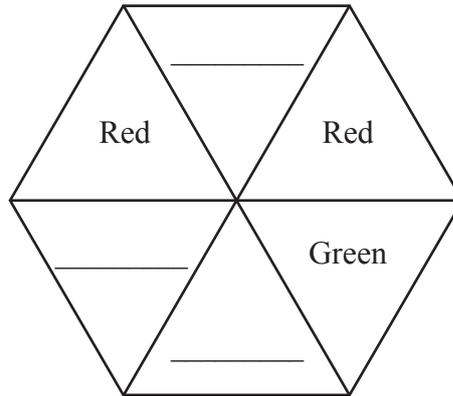
- (iii) The spinner will land on White

impossible      unlikely      even      likely      certain

[3]



(b) Here is a different fair 6-sided spinner.



Wayne will spin this spinner once.

The spinner is more likely to land on Green than to land on Red.

Fill in the missing colours on the spinner above to show how you think this spinner might look.

[1]

6 In a raffle all 400 tickets were sold.

The tickets were numbered from 1 to 400

One ticket is to be drawn at random to win the prize.

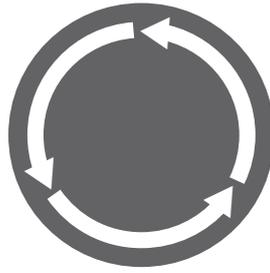
What is the probability that the winning ticket will be numbered greater than 275?

Answer \_\_\_\_\_ [2]

[Turn over



7



(a) How many lines of symmetry does the sign have?

Answer \_\_\_\_\_ [1]

(b) What is the order of rotational symmetry of the sign?

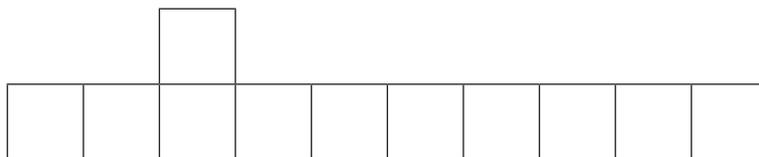
Answer \_\_\_\_\_ [1]

8 (a) Add one square to the shape below to make a shape with rotational symmetry of order 2



[1]

(b) Add one square to the shape below to make a shape with one line of symmetry.



[1]



9 Calculate

(a)  $9 + 6 \div 3$

Answer \_\_\_\_\_ [1]

(b)  $7 + 3(9 - 5)$

Answer \_\_\_\_\_ [1]

10 Put brackets in the following statements to make them true.

(a)  $7 \times 2 + 9 - 5 = 72$

[1]

(b)  $6 - 2 \times 3 + 4 = 28$

[1]

[Turn over



11 Six hundred pupils in a school completed a survey.

The survey was completed by 275 girls.

The survey found that 83 boys were left-handed and that 196 girls were right-handed.

Use this information to complete the two-way table below.

	Boys	Girls
Left-handed		
Right-handed		

[2]

**Quality of written communication will be assessed in this question.**

12 The petrol consumption of a car is 64 miles to the gallon.

How many miles should the same car do to the litre?

1 gallon = 8 pints. **Show your working clearly.**

Answer \_\_\_\_\_ [2]



13 (a) Use the formula  $P = 3Q + 7R$  to find  $P$  when  $Q = 8$  and  $R = 3$

Answer  $P =$  \_\_\_\_\_ [2]

(b) Use the formula  $V = 3W + 9X$  to find  $X$  when  $V = 57$  and  $W = 7$

Answer  $X =$  \_\_\_\_\_ [3]

(c)  $d = \frac{e-f}{g}$

Calculate the value of  $d$  when  $e = -8$ ,  $f = 12$  and  $g = 4$

Answer  $d =$  \_\_\_\_\_ [2]

[Turn over



14 (a) Write down the reciprocal of 9

Answer \_\_\_\_\_ [1]

(b) Calculate  $(-42) \div (-6)$

Answer \_\_\_\_\_ [1]

15 In a game at a fairground, each of 300 people pays 50p to play.

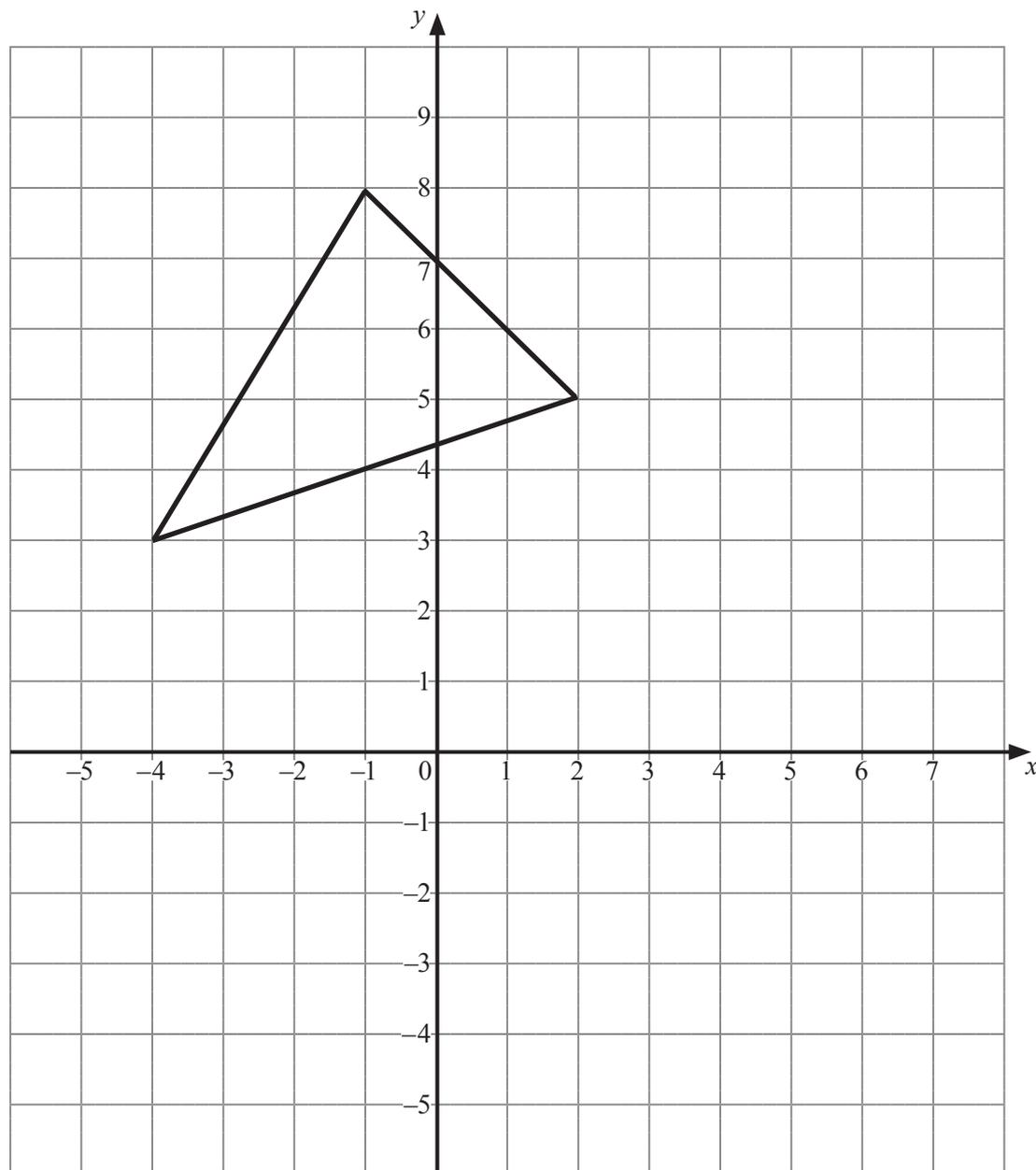
Forty of the 300 people each win a prize worth £1.80 There are no other prize-winners.

What profit does the game make?

Answer £ \_\_\_\_\_ [2]



16



- (a) On the diagram above, reflect the given triangle in the line  $y = 2$

Label your answer A.

[2]

- (b) On the same diagram, translate the given triangle by  $\begin{pmatrix} 4 \\ -2 \end{pmatrix}$

Label your answer B.

[2]

[Turn over

9861



\*20GMT5117\*

17 Michael tosses a fair coin and rolls a fair 6-sided dice.

Work out the probability that the outcome is a head and a three.

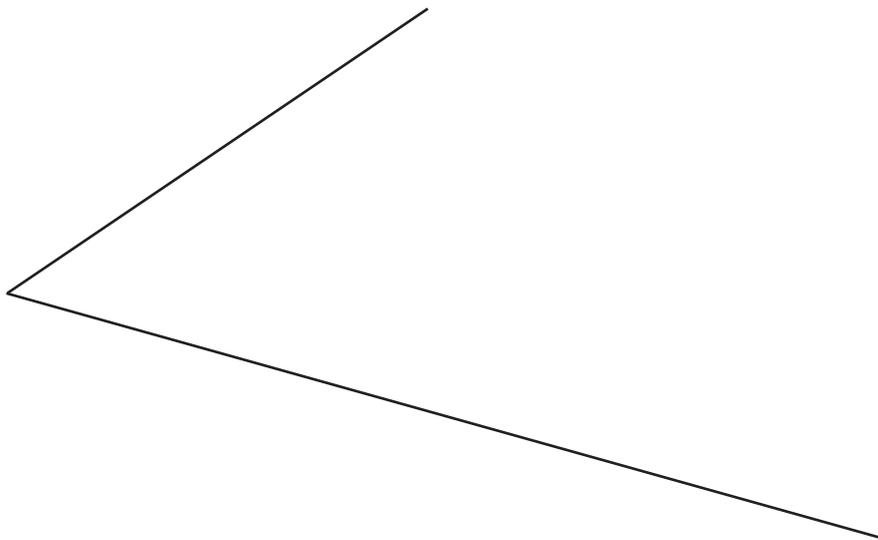
You must show how you found your answer.

Answer \_\_\_\_\_ [2]



18 Using a ruler and compasses only, construct the bisector of the angle below.

You must show all construction lines.



[2]

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**THIS IS THE END OF THE QUESTION PAPER**

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For Examiner's use only	
Question Number	Marks
1	
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<b>Total Marks</b>	
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Examiner Number

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